What is claimed is:

1. An image protection system, comprising:
an image compression/encryption device, comprising:
a compression unit to separate an image into base image data and auxiliary image data according to a compression technique, and compress the base image data to compressed base image data according to the compression technique;
an encryption unit coupled to the compression unit to receive and encrypt the auxiliary image data to an auxiliary image data cipher; and
an image composing unit coupled to the compression unit and the encryption unit to receive and compose the compressed base image data and the auxiliary image data cipher into a protected image corresponding to the image.

2. The system of claim 1 further comprising:
an image recovery device, comprising:
an image decomposition unit to receive and decompose the protected image into the compressed base image data and the auxiliary image data cipher;
a decryption unit coupled to the image decomposition unit to receive and decrypt the auxiliary image data cipher to the auxiliary image data using a decryption key; and
a decompression unit coupled to the image decomposition unit and the decryption unit to receive the compressed base image data and the auxiliary image

data, decompress the compressed base image data to the base image data, and combine the base image data and the auxiliary image data to recover the image according to the compression technique.

3. The system of claim 2 wherein the image compression/encryption device further comprises a transformation unit to perform discrete wavelet transformation on the image in advance.

4. The system of claim 3 wherein the image recovery device further comprises an anti-transformation unit to perform anti-discrete wavelet transformation on the image after the image is combined.

5. The system of claim 4 wherein the image compression/encryption device further comprises a quantization unit to quantize each coefficient of the image after the discrete wavelet transformation.

6. The system of claim 5 wherein the image recovery device further comprises an anti-quantization unit to anti-quantize each coefficient of the image before the anti-discrete wavelet transformation.

7. The system of claim 1 wherein the compression technique is region of interest (ROI) compression.

8. The system of claim 1 wherein the compression technique is resolution compression.

9. The system of claim 1 wherein the compression technique is quality compression.

10. The system of claim 1 wherein the compression unit further compresses the auxiliary image data.

11. An image protection method, comprising the steps of:
separating an image into base image data and auxiliary image data according to a compression technique;
compressing the base image data to compressed base image data according to the compression technique;
encrypting the auxiliary image data to an auxiliary image data cipher; and
composing the compressed base image data and the auxiliary image data cipher into a protected image corresponding to the image.

12. The method of claim 11 further comprising an image recovery method, comprising the steps of:
decomposing the protected image into the compressed base image data and the auxiliary image data cipher;
decrypting the auxiliary image data cipher to the auxiliary image data using a decryption key;
decompressing the compressed base image data to the base image data according to the compression technique; and
combining the base image data and the auxiliary image data to recover the image according to the compression technique.

13. The method of claim 12 further comprising performing discrete wavelet transformation on the image in advance.

14. The method of claim 13 further comprising performing anti-discrete wavelet transformation on the image after the image is combined.

15. The method of claim 14 further comprising quantizing each coefficient of the image after the discrete wavelet transformation.

16. The method of claim 15 further comprising anti-quantizing each coefficient of the image before the anti-discrete wavelet transformation.

17. The method of claim 11 wherein the compression technique is region of interest (ROI) compression.

18. The method of claim 11 wherein the compression technique is resolution compression.

19. The method of claim 11 wherein the compression technique is quality compression.

20. The method of claim 11 further comprising compressing the auxiliary image data.